

FORM PTO-1449  
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

501082.18

APPLICATION NO.

10/805,118

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT(S)

Vishnu K. Agarwal

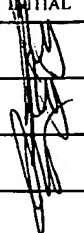
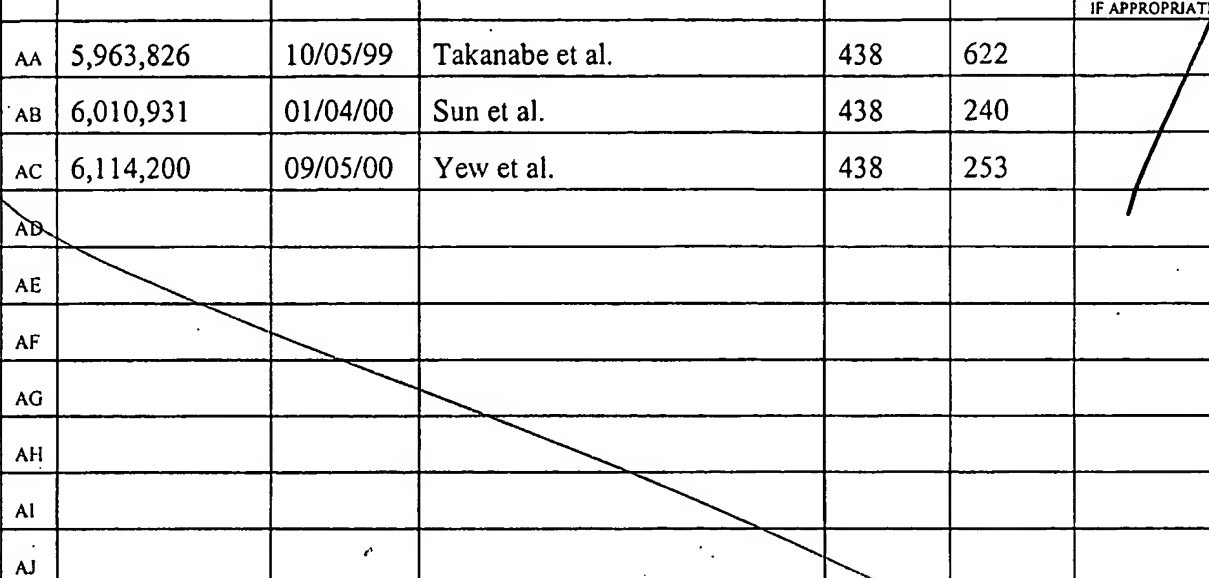
FILING DATE

March 19, 2004

GROUP ART UNIT

2815

## U.S. PATENT DOCUMENTS

| *EXAMINER<br>INITIAL  |    | DOCUMENT NUMBER | DATE     | NAME            | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE   |
|---|----|-----------------|----------|-----------------|-------|----------|---|
|  | AA | 5,963,826       | 10/05/99 | Takanabe et al. | 438   | 622      |  |
|   | AB | 6,010,931       | 01/04/00 | Sun et al.      | 438   | 240      |   |
|   | AC | 6,114,200       | 09/05/00 | Yew et al.      | 438   | 253      |   |
|   | AD |                 |          |                 |       |          |   |
|   | AE |                 |          |                 |       |          |   |
|   | AF |                 |          |                 |       |          |   |
|   | AG |                 |          |                 |       |          |   |
|   | AH |                 |          |                 |       |          |   |
|   | AI |                 |          |                 |       |          |   |
|   | AJ |                 |          |                 |       |          |   |

## FOREIGN PATENT DOCUMENTS

|  |    | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION |    |
|--|----|-----------------|------|---------|-------|----------|-------------|----|
|  |    |                 |      |         |       |          | YES         | NO |
|  | AK |                 |      |         |       |          |             |    |
|  | AL |                 |      |         |       |          |             |    |
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|  | AN |                 |      |         |       |          |             |    |
|  | AO |                 |      |         |       |          |             |    |

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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EXAMINER

DATE CONSIDERED

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(REV. 7-80)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
501082.18APPLICATION NO.  
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|----------------------|----|-----------------|----------|--------------------|-------|----------|-------------------------------|
|                      | AA | 5,888,588       | 03/30/99 | Nagabushnam et al. | 427   | 248.1    |                               |
|                      | AB | 6,060,741       | 05/09/00 | Huang              | 257   | 315      |                               |
|                      | AC | 6,235,632 B1    | 05/22/01 | Nogami et al.      | 438   | 675      |                               |
|                      | AD |                 |          |                    |       |          |                               |
|                      | AE |                 |          |                    |       |          |                               |
|                      | AF |                 |          |                    |       |          |                               |
|                      | AG |                 |          |                    |       |          |                               |
|                      | AH |                 |          |                    |       |          |                               |
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|                      | AJ |                 |          |                    |       |          |                               |

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|  | AK |                 |      |         |       |          |             |    |
|  | AL |                 |      |         |       |          |             |    |
|  | AM |                 |      |         |       |          |             |    |
|  | AN |                 |      |         |       |          |             |    |
|  | AO |                 |      |         |       |          |             |    |

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6/23/5

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(Use several sheets if necessary)APPLICANT(S)  
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March 19, 2004GROUP ART UNIT  
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## U.S. PATENT DOCUMENTS

| *EXAMINER<br>INITIAL |    | DOCUMENT NUMBER | DATE     | NAME       | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|----------------------|----|-----------------|----------|------------|-------|----------|-------------------------------|
| <i>[Signature]</i>   | AA | 5,089,441       | 02/18/92 | Moslehi    | 437   | 225      |                               |
| <i>[Signature]</i>   | AB | 5,753,559       | 05/19/98 | Yew et al. | 438   | 398      |                               |
| <i>[Signature]</i>   | AC | 6,194,263 B1    | 02/27/01 | Kim et al. | 438   | 255      |                               |
|                      | AD |                 |          |            |       |          |                               |
|                      | AE |                 |          |            |       |          |                               |
|                      | AF |                 |          |            |       |          |                               |
|                      | AG |                 |          |            |       |          |                               |
|                      | AH |                 |          |            |       |          |                               |
|                      | AI |                 |          |            |       |          |                               |
|                      | AJ |                 |          |            |       |          |                               |

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|--|----|-----------------|------|---------|-------|----------|-------------|----|
|  |    |                 |      |         |       |          | YES         | NO |
|  | AK |                 |      |         |       |          |             |    |
|  | AL |                 |      |         |       |          |             |    |
|  | AM |                 |      |         |       |          |             |    |
|  | AN |                 |      |         |       |          |             |    |
|  | AO |                 |      |         |       |          |             |    |

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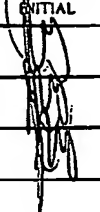
7/25/04

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|   |  |  |  |  |  |   |  |
|---|--|--|--|--|--|---|--|
| FORM PTO-1449<br>(REV.7-80)   |  | U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE |  | ATTY. DOCKET NO.<br><b>501082.18</b>     |  | APPLICATION NO.<br><b>10/805,118</b>          |  |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br><i>(Use several sheets if necessary)</i> |  |  |  | APPLICANT(S)<br><b>Vishnu K. Agarwal</b> |  |   |  |
|   |  |  |  | FILING DATE<br><b>March 19, 2004</b>     |  | GROUP ART UNIT<br><b>Not yet assigned 285</b> |  |



**U.S. PATENT DOCUMENTS**

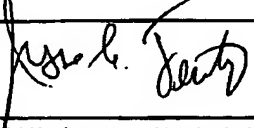
| EXAMINER<br>INITIAL   | DOCUMENT NUMBER | DATE         | NAME     | CLASS             | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|---|-----------------|--------------|----------|-------------------|----------|-------------------------------|
|  | AA              | 4,599,678    | 07/08/86 | Wertheimer et al. | 361      | 323                           |
|   | AB              | 6,156,674    | 12/05/00 | Li et al.         | 438      | 780                           |
|   | AC              | 6,350,706 B1 | 02/26/02 | Howard            | 438      | 781                           |
|   | AD              |              |          |                   |          |                               |
|   | AE              |              |          |                   |          |                               |
|   | AF              |              |          |                   |          |                               |
|   | AG              |              |          |                   |          |                               |
|   | AH              |              |          |                   |          |                               |
|   | AI              |              |          |                   |          |                               |
|   | AJ              |              |          |                   |          |                               |

**FOREIGN PATENT DOCUMENTS**

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION |    |
|-----------------|------|---------|-------|----------|-------------|----|
|                 |      |         |       |          | YES         | NO |
| AK              |      |         |       |          |             |    |
| AL              |      |         |       |          |             |    |
| AM              |      |         |       |          |             |    |
| AN              |      |         |       |          |             |    |
| AO              |      |         |       |          |             |    |

**OTHER PRIOR ART** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

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| EXAMINER  | DATE CONSIDERED <b>9/25/4</b> |
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|   |  |  |  |   |  |   |  |
|---|--|--|--|---|--|---|--|
| FORM PTO-1449<br>(REV. 7-80)  |  | U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE |  | ATTY. DOCKET NO.<br>501082.18                           |  | APPLICATION NO. 19805118<br><del>not yet assigned</del> |  |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br><i>(Use several sheets if necessary)</i> |  |  |  | APPLICANT(S)<br>Vishnu K. Agarwal                       |  |   |  |
|   |  |  |  | FILING DATE 3/19/04<br><del>concurrently herewith</del> |  | GROUP ART UNIT 2815<br><del>not yet assigned</del>      |  |

| U.S. PATENT DOCUMENTS |                 |           |          |                  |          |                               |  |
|-----------------------|-----------------|-----------|----------|------------------|----------|-------------------------------|--|
| EXAMINER<br>INITIAL   | DOCUMENT NUMBER | DATE      | NAME     | CLASS            | SUBCLASS | FILING DATE<br>IF APPROPRIATE |  |
| AY                    | AA              | 3,649,886 | 03/14/72 | Kooi             | 257      | 638                           |  |
|                       | AB              | 4,013,485 | 03/22/77 | Ma et al.        | 148      | 1.5                           |  |
|                       | AC              | 4,717,602 | 01/05/88 | Yamazaki         | 427      | 583                           |  |
|                       | AD              | 4,814,842 | 03/21/89 | Nakagawa et al.  | 357      | 23.7                          |  |
|                       | AE              | 4,823,182 | 04/18/89 | Okumura          | 357      | 67                            |  |
|                       | AF              | 5,232,871 | 08/03/93 | Ho               | 438      | 653                           |  |
|                       | AG              | 5,332,444 | 07/26/94 | George et al.    | 134      | 1                             |  |
|                       | AH              | 5,376,593 | 12/27/94 | Sandhu et al.    | 437      | 242                           |  |
|                       | AI              | 5,438,012 | 08/01/95 | Kamiyama         | 437      | 60                            |  |
|                       | AJ              | 5,440,174 | 08/08/95 | Nishitsuji       | 257      | 770                           |  |
|                       | AK              | 5,552,339 | 09/03/96 | Hsieh            | 437      | 190                           |  |
|                       | AL              | 5,552,341 | 09/03/96 | Lee              | 437      | 192                           |  |
|                       | AM              | 5,622,888 | 04/22/97 | Sekine et al.    | 438      | 398                           |  |
|                       | AN              | 5,670,808 | 09/23/97 | Nishihori et al. | 257      | 310                           |  |
|                       | AO              | 5,700,710 | 12/23/97 | Zenke            | 437      | 60                            |  |
|                       | AP              | 5,719,410 | 02/17/98 | Suehiro et al.   | 257      | 77                            |  |
|                       | AQ              | 5,723,384 | 03/03/09 | Park et al.      | 438      | 756                           |  |
|                       | AR              | 5,726,083 | 03/10/98 | Takaishi         | 438      | 210                           |  |
|                       | AS              | 5,733,816 | 03/31/98 | Iyer et al.      | 438      | 592                           |  |
|                       | AT              | 5,843,843 | 12/01/98 | Lee et al.       | 438      | 688                           |  |
|                       | AU              | 5,846,859 | 12/08/98 | Lee              | 438      | 253                           |  |
|                       | AV              | 5,852,307 | 12/22/98 | Aoyama et al.    | 257      | 295                           |  |
|                       | AW              | 5,853,500 | 12/29/98 | Joshi et al.     | 148      | 247                           |  |
|                       | AX              | 5,861,675 | 01/19/99 | Sasaki et al.    | 257      | 764                           |  |
|                       | AY              | 5,913,145 | 06/15/99 | Lu et al.        | 438      | 643                           |  |

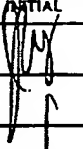

  

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| EXAMINER<br><i>Asst. Ex. Party</i> | DATE CONSIDERED<br>9/25/04 |
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|  |  |   |   |
|--|--|---|---|
| FORM PTO-1449<br>(REV. 7-80)   | U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE | ATTY. DOCKET NO.<br>501082.18                       | APPLICATION NO. <u>0805118</u><br><del>not yet assigned</del> |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br>(Use several sheets if necessary) |  | APPLICANT(S)<br>Vishnu K. Agarwal                   |   |
|  |  | FILING DATE <u>3/19/04</u><br>concurrently herewith | GROUP ART UNIT <u>2815</u><br>not yet assigned                |

## U.S. PATENT DOCUMENTS

| *EXAMINER<br>INITIAL  |    | DOCUMENT NUMBER | DATE     | NAME               | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|---|----|-----------------|----------|--------------------|-------|----------|-------------------------------|
|    | AZ | 5,955,758       | 09/21/99 | Sandhu et al.      | 257   | 306      |                               |
|   | BA | 5,956,594       | 09/21/99 | Yang et al.        | 438   | 396      |                               |
|   | BB | 5,970,384       | 10/19/99 | Yamazaki et al.    | 438   | 795      |                               |
|   | BC | 5,994,183       | 11/30/99 | Huang et al.       | 438   | 256      |                               |
|   | BD | 6,017,818       | 01/25/00 | Lu                 | 438   | 653      |                               |
|   | BE | 6,077,742       | 06/20/00 | Chen et al.        | 438   | 255      |                               |
|   | BF | 6,087,257       | 07/11/00 | Park et al.        | 438   | 675      |                               |
|   | BG | 6,100,187       | 08/08/00 | Hintermaier et al. | 438   | 653      |                               |
|   | BH | 6,100,193       | 08/08/00 | Suchiro et al.     | 438   | 685      |                               |
|   | BI | 6,107,152       | 08/22/00 | Derderian          | 438   | 381      |                               |
|   | BJ | 6,136,690       | 10/24/00 | Li                 | 438   | 627      |                               |
|   | BK | 6,153,519       | 11/28/00 | Jain et al.        | 438   | 681      |                               |
|   | BL | 6,162,715       | 12/19/00 | Mak et al.         | 438   | 592      |                               |
|   | BM | 6,165,802       | 12/26/00 | Cuchiaro et al.    | 438   | 3        |                               |
|   | BN | 6,190,837 B1    | 02/20/01 | Jung et al.        | 430   | 315      |                               |
|   | BO | 6,201,276 B1    | 03/13/01 | Agarwal et al.     | 257   | 315      |                               |
|   | BP | 6,204,203       | 03/20/01 | Narwankar et al.   | 438   | 785      |                               |
|   | BQ | 6,245,662       | 06/12/01 | Naik et al.        | 438   | 622      |                               |
|   | BR | 6,255,688 B1    | 07/03/01 | Lee et al.         | 257   | 311      |                               |
|   | BS | 6,281,542 B1    | 08/28/01 | Wu                 | 257   | 308      |                               |
|   | BT | 6,303,510 B1    | 10/16/01 | Chien et al.       | 438   | 710      |                               |
|   | BU | 6,303,972       | 10/16/01 | Agarwal            | 257   | 532      |                               |
|   | BV | 6,309,713 B1    | 10/30/01 | Mak et al.         | 427   | 569      |                               |
|   | BW | 6,320,213 B1    | 11/20/01 | Kirlin et al.      | 257   | 295      |                               |
|  | BX | 6,331,380 B1    | 12/18/01 | Ye et al.          | 430   | 318      |                               |

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| *EXAMINER<br>INITIAL  |    | DOCUMENT NUMBER  | DATE     | NAME                           | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |    |
| [Signature]   | BY | 6,355,512 B1   | 03/12/02 | Yamazaki et al.                | 438   | 158      |                               |    |
|   | BZ | 6,372,633 B1   | 04/16/02 | Maydan et al.                  | 438   | 637      |                               |    |
|   | CA | 6,383,951 B1   | 05/07/02 | Li                             | 438   | 781      |                               |    |
|   | CB | 6,468,854 B1   | 10/11/02 | Agarwal                        | 438   | 238      |                               |    |
|   | CC | 6,472,264 B1   | 10/29/02 | Agarwal                        | 438   | 238      |                               |    |
|   | CD | 6,479,340 B1   | 11/12/02 | Agarwal                        | 438   | 238      |                               |    |
|   | CE | 6,489,194 B1   | 12/03/02 | Agarwal                        | 438   | 238      |                               |    |
|   | CF | 6,607,975 B1   | 08/19/03 | Agarwal                        | 438   | 622      |                               |    |
|   | CG | 2001/0001501 A1  | 05/24/01 | Lee et al.                     | 257   | 534      |                               |    |
|   | CH | 2002/0187633 A1  | 12/12/02 | Akram                          | 438   | 652      |                               |    |
| FOREIGN PATENT DOCUMENTS  |    |  |          |                                |       |          |                               |    |
|   |    | DOCUMENT NUMBER  | DATE     | COUNTRY                        | CLASS | SUBCLASS | TRANSLATION                   |    |
| [Signature]   | CI | 355011329 A  | 01/26/80 | JP (Abstract only)             |       |          | YES                           | NO |
|   | CJ | 410070091 A  | 03/10/98 | JP (Abstract only)             |       |          | X                             |    |
| OTHER PRIOR ART <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>   |    |  |          |                                |       |          |                               |    |
| [Signature]   | CK | Anonymous, "Oxide-Free Dielectric/GaAs Interface With No Excess As", IBM Technical Disclosure Bulletin, Vol. 33, No. 11, April 1, 1991, p. 352.  |          |                                |       |          |                               |    |
|   | CL | Schulz, S.E. et al., "Influence of Water Preclean Before Selective Tungsten CVD on Surface Properties of Interconnect and Intermetal Dielectric Materials", Physica Status Solidi A, Vol. 145, No. 2, October 16, 1994, pp. 311-318. |          |                                |       |          |                               |    |
| EXAMINER <b>[Signature]</b>   |    |  |          | DATE CONSIDERED <b>9/25/04</b> |       |          |                               |    |
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(REV. 7-80)

SEP 28 2006

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GROUP ART UNIT

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| AA                   |  | 6,017,818       | 01/25/00 | Lu         | 438   | 653      |                               |
| AB                   |  | 6,624,069       | 09/23/03 | Lee et al. | 438   | 665      |                               |
| AC                   |  |                 |          |            |       |          |                               |
| AD                   |  |                 |          |            |       |          |                               |
| AE                   |  |                 |          |            |       |          |                               |
| AF                   |  |                 |          |            |       |          |                               |
| AG                   |  |                 |          |            |       |          |                               |
| AH                   |  |                 |          |            |       |          |                               |
| AI                   |  |                 |          |            |       |          |                               |
| AJ                   |  |                 |          |            |       |          |                               |

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|--|----|-----------------|------|---------|-------|----------|-------------|----|
|  |    |                 |      |         |       |          | YES         | NO |
|  | AK |                 |      |         |       |          |             |    |
|  | AL |                 |      |         |       |          |             |    |
|  | AM |                 |      |         |       |          |             |    |
|  | AN |                 |      |         |       |          |             |    |
|  | AO |                 |      |         |       |          |             |    |

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

|  |    |  |
|--|----|--|
|  | AP |  |
|  | AQ |  |
|  | AR |  |

EXAMINER

DATE CONSIDERED

\* EXAMINER

Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).